Title: SOFTWARE TOOL FOR SYNTHESIZING A REAL-TIME OPERATING SYSTEM

## **REMARKS**

This Amendment and Response is filed in connection with a Request for Continued Examination and in response to the Final Office Action mailed on <u>March 13, 2007</u>. Please amend the above-identified patent application accordingly.

Claims 1-6, 15-20, and 22 are amended herein, no claims are canceled, and no claims are newly added; as a result, claims 1-7 and 15-28 are pending in this application.

## §103 Rejection of the Claims

Claims 1-3, 5, 7, 15-17, 19, 21-24, 26, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman, et al. (U.S. 4,796,179, hereinafter, "Lehman") in view of Desmet et al (hereinafter Desmet).

Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness, because even if combined, the cited references fail to teach or suggest all of the claim limitations of the independent claims of the present Application.

Applicant continues to assert that the previously submitted claims with the recited limitations distinguish over Lehman and all other art of record. However, the claims have been amended herein to further distinguish the claimed invention from the art of record. Specifically, amended Claim 1 recites:

- "A method for developing a real-time operating system, comprising:
  - a) specifying a set of n tasks, task (1) through task(n), to be scheduled for execution;
  - b) specifying a scheduling algorithm for scheduling the execution of said set of n tasks; and
  - c) synthesizing source code from commands embedded in source code to implement a task scheduler that uses said scheduling algorithm for controlling execution of said set of n tasks, said synthesized source code being executable on a target system after compilation." (Emphasis Added)

As correctly admitted in the March 13 Office Action at pg. 4, "Lehman does not explicitly disclose the task of the set of *n* tasks being selectively configurable as a preemptive or a non-preemptive task; synthesizing source code with embedded commands to implement a task scheduler that uses the scheduling algorithm and the

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embedded commands for controlling execution of said n tasks." Lehman does not use embedded commands. Rather, Lehman provides functional blocks where each functional block has a corresponding source code template which is used to generate the source code. Each template in Lehman includes invariant code which defines a computation, and variables for tailoring the source code to use any specified parameters and also to couple the source code to the memory locations for its inputs and outputs. The present invention as currently claimed does not use or need templates or invariant code. As such, Lehman fails to teach each and every element of claim 1.

Desmet, by its own admission is non-analogous art. Specifically, Desmet is a modeling and simulation solution, not a system intended to actually execute on a target system as in the present invention. On page 1, right column, second paragraph of Desmet, Desmet states:

> "SoCOS, as a system-level design environment, is used for modeling and simulating the system...It is important to notice that the major difference with an RTOS is, that SoCOS is used for simulation and analysis of the system, including its real-time behavior, on a workstation, while an RTOS is an implementation library running on the target platform."

As clearly stated in Desmet, Desmet describes a SoCOS modeling and simulating system. The presently claimed invention is implemented with an RTOS system intended for execution on a target system as clearly taught in the filed patent specification. Thus, Desmet distinguishes itself from the presently claimed invention. This distinction has been highlighted in the amended independent claims presented herein. Specifically, the amended independent claims presented include the limitation, "..., said synthesized source code being executable on a target system after compilation." Because Desmet does not describe a system for execution on a target system, Desmet cannot render the presently claimed invention obvious and cannot be combined with Lehman. Further, the Xu and Lake references do not render the presently claimed invention obvious.

Therefore, Applicants respectfully submit that at least for these reasons, independent claims 1, 15, and 22 and their dependent claims are allowable over Lehman **AMENDMENT AND RESPONSE UNDER 37 CFR § 1.114** 

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and Desmet. Applicants submit that the current rejections should be withdrawn.

## **CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Jim H. Salter at 408-406-4855 to facilitate prosecution of this application.

Respectfully submitted,

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Date July 2, 2007

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop BCE, Comprissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this \_2nd\_ day of \_\_July\_\_2007.

Jim H. Salter

Name

Signature